

Further records of range extension in the House Crow *Corvus splendens*

by Colin Ryall

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The House Crow *Corvus splendens* is indigenous to the Indian Subcontinent, southern Iran and Myanmar (Burma). Over the past century or so they have spread, by both deliberate introduction and ship-assisted passage, throughout much of the Indian Ocean rim including the Arabian Peninsula, eastern and southern Africa, some Indian Ocean islands and sites in southern Asia.

Range expansion continues and the aim of this paper is to update information given in Ryall (1994, 1995) using information from published records, correspondence from past reporters or responses to requests for information in international and national journals. Contributors' initials are given in brackets after information and names are given in full under Contributors.

Europe

Netherlands

The population of House Crows, initiated in Hoek van Holland in 1994 (Ryall 1995) has now increased through both successful breeding by the founder pair, starting in their first year (Anon 1994a), and by the arrival of additional birds.

In November 1994 a further, individual bird arrived in Renesse, c.30 km SW of Hoek van Holland (Ebels & Westerlaken 1996) and remained in association with Jackdaws *Corvus monedula* and Carrion Crows *Corvus corone* (van de Berg 1994) until at least 27 December 1995. Reports of single birds in Renesse in June 1997, 13-14 June 1999, early 2001 (GS) and of a dead bird found on 19 May 2001, may refer to the original bird (GO) or perhaps further arrivals.

The two original Hoek birds have survived eight Dutch winters, including the coldest for a decade when temperatures on 25 and 26 January 1996 reached -8°C in Rotterdam (GS). This pair raised single chicks in 1997, 1998 (Ebels 1998) and 2000. Thus five House Crows were in Hoek van Holland in February 2000, which increased to eight during 2001 (GO).

Additional records are: single birds flying at Den Haag, 31 March and 7 April 1999, may concern birds from the Hoek van Holland population, c. 20 km distant (GO); one at Muiden, near Amsterdam, August-December 1999 (TE, PE); one in Utrecht, 30 km S of Amsterdam, 18-19 December 1999 (GS), which may refer to the same bird (Berg & Bosman 2001); one at Kollummerland, Friesland, 5-19 August 1998; possibly the same bird at Winsum, Groningen, 20-22 September 1998 (GS); one at Breskens, Zeeland, 3 May 1999 (GO); one on the island of Schiermonnikoog, eastern Waddenzee, 21-23 March 2000; one in Hoorn, c. 40 km NE of Amsterdam,

December 2000 (GS), which may also refer to the Muiden bird; one at Den Haag, 13 May 2001, which may be one of the Hoek birds (GO).

Republic of Ireland

One seen and photographed in Dunmore East harbour, County Waterford, 3 November 1974 (Anon 1994b), was the first record of the House Crow for Europe. Although mentioned in the 1974/5 Waterford Bird Report (O'Meara 1976), it was largely overlooked until interest in the species increased following the Dutch arrivals. It was then accepted by the Irish Rare Birds Committee and admitted to Category D2 of the Irish List (McAdams *et al.* 1999).

The crow was first encountered perched in the rigging of a trawler, being described as "confiding" and in pristine condition. It remained in the area for 5 years, allegedly fed by some local people until at least August 1979, by which time it was in poor condition (Mullarney *et al.* 1999). These authors suggested that the bird may have arrived on a cattle boat from the Middle East.

UK

One, identified initially as a Hooded Crow *Corvus corone cornix* and later as a House Crow, was seen on Bournemouth seafront on 25 December 1997 (Anon 1997). Despite searches the bird was not seen again (SR).

Denmark

There are two records: one seen on a single day in autumn 1986 near the coal harbour at Stignæs, Skælskør, Vestsjælland (RC); one on 17 September 1996, seen in a city park in Haderslev, Jylland (Anon 1996). Neither was reported to the Danish Rarities Committee.

France

There are two recent reports: one at Roubaix Nord, near Lille, 10 January 2000 (Davies 2001) which, if accepted, is the first record for France; one seen along the canal at Givors, south of Lyon, 18-21 May 2001 (Anon 2001) and photographed by G Bruneau (J-YF).

Spain

The House Crow which appeared on Gibraltar in spring 1991 (Ryall 1994) is also reported to have flown to Algeciras, c. 8 km away on the Spanish mainland (JP), the first record for Spain.

Middle East

Saudi Arabia

Having arrived in Jeddah in the late 1970s and Eastern Province in the early 1980s, populations have continued to increase rapidly and spread along the east coast. In Ras Tanura, Eastern Province, a control programme has been launched (Jennings 1995). They are now considered a nuisance in parts of Jeddah with reports of attacks on humans appearing in the local press (RS).

Oman

House Crows have spread and are now established along the coastal strip between Muscat and Sohar, and are beginning to spread inland in some areas (MJ).

Bahrain

Numbers appear to have remained relatively stable since they were first recorded as resident in the 1970s (MJ).

Qatar

House Crows were not reported from Qatar until the early 1990s. Records are: 26 House Crows seen at Ras Laffan, October 1993 - March 1994, around a new industrial town under construction *c.* 60 km north of Doha, and subsequently at a beach villa compound further south; up to 13 counted at Al Khar, *c.* 40 km north of Doha, February - April 1994 (Nation *et al.* 1997); three seen for at least 3 hours at Ras Abu Ahboud, an urban part of Doha, 13 April 1994; on 24 April 1994, a newspaper article on the species triggered reports of 30-40 birds over the proceeding 7 months, from 4 separate locations on the east coast and offshore; several seen 15 km south of Doha in June 1994; 4 reported at Halul Island, the main station for offshore oil and shipping, January - April 1994, where they were suspected to be raiding domestic pigeon nests (Nation *et al.* 1997).

Yemen

House Crows have long been established in Aden (Ryall 1994), spreading to adjacent Lahej and Abiyan, and then Hodeidd and El Khawka by the 1980s. They have become a major pest in the Aden-Lahej-Abiyan area due to the extremely high density that the House Crow population has achieved, presumably supported the ready availability of refuse, drying fish and market gardens. Jennings (1992) reviewed their status and described attempts to control their numbers in Aden.

Socotra

In late 1996 or early 1997, two were reported by a ship's captain to have stayed with his ship from Aden, alighting when the ship arrived at Hadibu on Socotra. They nested in a tall palm in a nearby wadi and have remained there ever since. Numbers have increased to 6 in November 1997, 15 by September 1998, 20 by December 1998 (MJ) and 26 by May 1999 (OASA-S). An eradication programme was launched in December 1998 and has reduced the population (OASA-S).

Islands of the Indian Ocean

Seychelles

Further details have come to light concerning the Seychelles population, which modifies that given in Ryall (1994). A single bird arrived in Mahé on a ship from Bombay in 1970, but the breeding population did not establish until several birds arrived there in 1977 (CF). Though the population was centred on Mahé, isolated birds were also seen on Bird Island, Aride, Praslin, Moyenne, Cousin and Ile aux

Vaches Marines (Skerrett *et al.* 2001). Having reached a peak of *c.* 25 birds in 1986, centred around Anse Etoile, they appear to have been extirpated after a concerted eradication programme; the last two birds were shot in Victoria in mid-1994. Further single birds have been seen on Mahé since then: one was shot at the Providence refuse dump in mid 1998 and one seen at Machabee in mid-2000. Skerrett *et al.* (2001) suggested that these were probably new arrivals, emphasising the need for constant vigilance.

East Asia & Australia

Thailand

House Crows formerly occurred at Phet Buri, but there are no recent records (Madge & Burn 1994). A single bird was, however, seen 550 km to the south at Krabi on 5 June 2001 (Robson 2001).

Malaysia

Though long established in Malaysia they were, until recently, restricted to the mainland (Ryall 1994). Recent records elsewhere include one at Kota Kinabalu, Sabah, July 1997, and two on 7 August 1999 (SH). A local birdwatcher reported that there had been several around this city for "several years" (AS).

Indonesia

First recorded 6 September 1984, when one was seen at Cidaon in the Ujung Kulon National Park, Java (MacKinnon & Phillipps 1993). In September 1986, one appeared repeatedly and was photographed at the camp of the Zoological Expedition to the Karakataus on Anak Karakatau (Thornton *et al.* 1990). It was tame, inquisitive and attempted to steal food scraps at the camp kitchen. One was seen perching on a telephone wire in Belawan, a major port *c.* 20 km from the city of Medan, Northern Sumatra (Shepherd 2000), probably in January 1998 (DH). This bird most probably arrived by boat from the neighbouring population *c.* 100 km away in Klang, Malaysia, across the Strait of Malacca.

Singapore

The population which numbered 1800 to 3700 in 1987 (Ryall 1994) has now grown to at least 20,000 birds, occupying 25 roosts in tall trees. They are considered to have reached pest proportions (SKL) and the authorities are now undertaking a control programme. The numbers are swollen by birds flying over from neighbouring Malaysia where there has long been a thriving population (DW).

Hong Kong

House Crows, possibly escaped captives (Viney *et al.* 1996), were recorded in Kowloon in ones and twos from the mid 1970s to 1989 (Ryall 1994). The population has clearly grown recently as flocks of 10 - 20 are now seen regularly in the area (Fung 2000). They probably breed near the new container port at Stonecutters (PL) and have been seen regularly around the port area since late 1998 (MK).

Taiwan

One was seen in the Lang-Yu Islet, Taitung County, 8 July 1980 (L). Although a typhoon occurred at the time, the nearest populations were then in Burma and Malaysia, 2,500 – 3,000 km away, and so ship-assisted introduction seems the most likely source.

The House Crow was recently included in Appendix II of the Checklist of Birds of Taiwan prepared by the Chinese Wildbird Federation (2000), indicating that it has been recorded since 1995. However, a photograph of a crow perched on a power line was not regarded, beyond doubt, to be a House Crow by the Taiwan Record Committee (W-hF)

Japan

A House Crow, unable to fly, was captured on a street near the Osaka Port of Konohana-ku, 9 January 1981, and was placed in Tennoji Zoo (Nakamura 1987). This record was accepted by the Bird Record Committee as a ship-assisted arrival but, remarkably, this crow was subsequently found to speak “good Japanese” and so has since been regarded as an escape or release from captivity (NI).

Australia

House Crows have arrived in Australia on many occasions since the 1920s (Ryall 1994). Up to June 2000, more than 50 arrivals have been recorded. In 1951, a pair nested in Fremantle, but this pair and all subsequent arrivals have been killed (MM).

Africa

Djibouti

After their arrival in 1958, the population in Djibouti city and later, in Obok, reached a high density, and there are now smaller populations in Tadjoura and Loyada (Archer 2001). According to Archer, an intensive control programme in the late 1990s has greatly reduced the Djibouti city population.

Somalia

Several dozen House Crows were seen in Berbera on the north coast in 1988, indicating a well established colony (Fry & Keith 2000). These may have spread by ship from the massive Aden population *c.* 280 km due north or from Djibouti. They are also present in Zeila *c.* 200 km to the west (Ryall 1994).

Kenya

Although established in Mombasa coast since the 1940s and Malindi, to the north, since the late 1970s, they did not spread further than *c.* 50 km inland, probably due to the arid unpopulated savannah that lay beyond (Ryall 1992). The Mombasa population grew to an estimated one million by 1991 (Schmidt 1996) despite various control attempts, and the Malindi population had also reached pest proportions by 1988 (Archer 1994).

Starting in 1984, a range of control strategies have been applied intermittently in the Mombasa area and along the Kenyan coast, including poisoning, nest destruction, trapping, reducing food availability and occasionally shooting (CR). In the mid 1990s, a further programme was implemented, along with monitoring of the crow population (Lens 1996). Likewise, in Malindi and Watamu, a control programme, using similar approaches, was launched in November 1988 with great success (Archer 2001).

In the early 1990s, a single bird was seen in a Nairobi city park and two at Hillcrest School, Nairobi, *c.* 500 km inland from Mombasa (GCS). These are most likely the result of deliberate releases or escapes.

Tanzania

The once dense and long established population of House Crows in Zanzibar was, due to its pest status, reduced by 80% between 1990 and 1995 through an intensive eradication programme funded by FINNIDA (Archer 1996). Funds ran out so that the programme was discontinued in 1995 (WCST 1998).

Since their arrival in Dar-es-Salaam in the 1950s, House Crows have increased to 15,000 - 20,000 (Schmidt 1996) and have spread not only along the coastal strip but inland as far as Morogoro, where recorded in 1999 (HR). Since July 1997, a control programme has also been in operation in Dar-es-Salaam (WCST 1998).

Mozambique

Further to the information provided by Ryall (1994), House Crows were present in Inhaca Island by the 1960s (Nhancale *et al.* 1998) and they have been recorded there and in Maputo since 1976 (IS). Liversidge (1985) described them as a breeding resident on Inhaca Island and also present in Maputo. According to Nhancale *et al.* (1998), there have been several unsuccessful eradication campaigns and a further one is under consideration.

In December 1976, IS saw 8 to 10 birds near the Polana Hotel in the beach resort of Maputo and, in September 1991, 6 near the docks. The long established population on Inhaca Island has increased from the *c.* 50 in the mid-1980s to *c.* 100 in 1999, concentrated mainly around the Inhaca Resort Hotel, but crows have not been recorded at other locations along the Mozambique coast (SM).

South Africa

House Crows may have been present in Durban since 1966-67 (Newmann 1974). They have subsequently spread through several coastal cities (Ryall 1994). Since their arrival in Cape Town docks in the mid 1970s, they have increased rapidly and in 1999, they were common around Cape Town International Airport, mainly in small groups although flocks of up to 50 birds are frequent (RD). Single House Crows have also been seen at the University of the Western Cape campus. The birds that arrived in Cape Flats in 1989 (Ryall 1995) persisted as a small colony but had not increased substantially by mid-1996. Nevertheless, the species is expected to become "a dominant and problematic urban species in southern Africa" (Berruti 1997). They have also spread northwards from Durban to Richards Bay (Allan & Davies 2001).

A control programme employing shooting, trapping, nest destruction and poisoning was launched in Durban in 1989 (Berruti & Nichols 1991). This reduced the population from > 1000 to *c.* 150 by 1991 but numbers had risen again to > 500 by 1993 (Berruti 1997).

The Americas

Barbados

In 1994, a House Crow arrived in Barbados, the first such record for the Neotropics (Norton 1995). It was present from early May to August and during this period it was extremely mobile, being seen on the east and west coasts, at Bridgetown in the south, and in the centre of the island at *c.* 280 m a.s.l. (MF).

Chile

Further details of two birds which arrived in Punta Arenas in 1993 (Ryall 1995) have become available (Matus 1998). The birds, first sighted on 10 October 1993, were seen repeatedly foraging near a meat packing plant. They remained together for several months but at the beginning of the austral winter one crow was seen perched close to a chimney. The last record was on 8 June 1994, so that both disappeared during the austral winter of 1994.

U.S.A.

On 25 January 1995, a single House Crow was photographed at Cabrillo Beach, Los Angeles Harbour, California (KG). It was present for a "couple of years" prior to being photographed. Although the species has arrived on the Atlantic Coast on 2 or perhaps 3 occasions (Ryall 1995), this appears to be the first record for the west coast of North America.

Conclusions

Range Expansion

The House Crow's spread has continued unabated since the reviews of their distribution published previously (Ryall 1994, 1995) with, for example, a further extension eastwards through the islands of SE Asia. Introduced populations already established are increasing and consolidating as is evident in the Arabian Peninsula and South Africa, and they have now established breeding populations in 20 countries outside their native range. In addition birds, mainly single, have been reported from about 10 other locations, where they have so far failed to establish breeding populations. The latter records undoubtedly represent the tip of an iceberg, as many arrivals must go unnoticed and/or unreported.

The majority of records are from ports and other coastal locations, reinforcing the past observation that most spread is ship-assisted. In keeping with their regular appearance in Australia since the 1920s, House Crows continue to show a capacity for long ocean crossings as demonstrated by their appearance in Chile, California,

Charleston, New Jersey and Barbados. These longer journeys have undoubtedly been made easier in recent years by the increased speed of modern ocean-going vessels. Not all arrivals are ship-assisted, however; their occurrence in Osaka and Nairobi, and perhaps Hong Kong, may be attributable to deliberate releases or escapes of captive birds.

Concerns and control

They have continued to attained pest status as predators of native avifauna, crop raiders, nuisance, potential public health risk and so forth (Ryall & Reid 1987, Archer 2001) in virtually all locations where their population has built up, such that control/eradication programmes have been or are in progress at many sites; most recently in Djibouti, Socotra and Singapore. Feare & Mungroo (1989) have emphasized the particular threat House Crows pose to island endemic birds. With the exception of the Seychelles, where eradication has been achieved, control measures have only secured a temporary respite with populations quickly recovering as soon as control efforts are slackened, as in Mombasa in the late 1980s (*pers. obs*), in Durban (Berruti 1997) and in Zanzibar, where a very successful programme in the 1990s was discontinued due to lack of funds (Archer 2001). The approach adopted in Australia of "shooting on sight" has proved very successful in preventing House Crows from establishing at all, despite > 50 arrivals, presumably from the Indian subcontinent, over the last 80 years.

The continued presence of the small but increasing population in Hoek van Holland is noteworthy as this is the first evidence that the species can survive temperate winters and breed successfully. Added to this are other European records, albeit of solitary birds, from the Netherlands, Ireland, France, Gibraltar/Spain, Denmark and perhaps UK. Although these isolated birds have so far failed to establish breeding populations, the fact that some have probably survived for 5 to 7 years, in Waterford and Renesse, increases the chances of later arrivals facilitating breeding. The Hoek birds are a popular local attraction to birdwatchers and this, combined with public sensitivities on the control of alien bird species, suggests that the Dutch birds will persist unmolested. If, however, as seems to be the case, the population does gradually build up, lack of early action may make later control very difficult and expensive.

As introduced populations of House Crows increase, uncontrolled due to inadequate resources and/or lack of awareness, they may act as secondary nuclei of spread, so accelerating the overall rate of dispersal. Indeed, those appearing in Europe may well have originated from the long established Suez population, and those in Socotra from Aden. Ryall (1994) suggested that Sumatra and Madagascar may be under imminent threat of invasion. House Crows arrived in Sumatra in 1998, but as yet there are no reports from the ports of Madagascar.

Request for information

All records of new locations or update information on existing introduced House Crow populations, including numbers, activity, food sources, possible origin and

dates, would be greatly appreciated and can be sent via www.housecrow.com or e-mailed directly to c.ryall@farn-ct.ac.uk.

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References:

- Allan, D. & Davies, G. 2001. The 'problem' House Crow of Durban, South Africa – can, and should, they be 'brought to heal'? *Ostrich Supplement* No: 15: 253.
- Anon. 1994a. Bird News: European Bird Report. *Birdwatch* 25: 61.
- Anon. 1994b. Another House Crow. *Birding World* 7: 258.
- Anon. 1996. Bird News: European Bird Report. *Birdwatch* 45: 60.
- Anon. 1997. Bird News: European Bird Report. *Birdwatch* 57: 54.
- Anon. 2001. Bird News: European Bird Report. *Birdwatch* 110: 61.
- Archer, A. 1994. Indian House Crow control in Malindi and Watamu. *Kenya Birds* 3: 42-74.
- Archer, A. 1996. Indian House Crow control in Zanzibar. *Aliens* 3: 2.
- Archer, A. 2001. Control of the Indian House Crow *Corvus splendens* in eastern Africa. *Ostrich Supplement* 15: 147-152.
- Berruti, A. 1997. House Crow; In: Harrison, J.A., Underhill, L.G., Herremans, M., Tree, A.J., Parker, V. & Brown C.J. 1997. *The atlas of southern African birds Vol 2: Passerines*. BirdLife South Africa, Johannesburg.
- Berruti, A. & Nichols, G. 1991. Alien birds in Southern Africa: The crow must go. *Birding in South Africa* 43:52-57.
- Chinese Wildbird Federation. 2000. *Birding in Taiwan*. <http://www.geocities.com/0080/RainForest/9003/Checklist.htm> Nov. 2000.
- Davies, C. 2001. The European Bird Report: Passerines. *British Birds* 94: 428.
- Ebels, E.B. 1998. Huiskraai broedend in Hoek van Holland in 1997 en 1998. *Dutch Birding* 20: 291-295.
- Ebels, E.B. & Westerlaken, H. 1996. Huiskraaien bij Hoek van Holland sinds april 1994 en bij Renesse sinds November 1994. *Dutch Birding* 18: 6-10.
- Feare, C.J. & Mungroo, Y. 1989. Notes on the House Crow *Corvus splendens* in Mauritius. *Bull. Brit. Orn. Cl.* 109: 199-201.
- Fry, C.H. & Keith, S. 2000. *The birds of Africa*. Vol VI. Academic Press, London.
- Fung, R. 2000. A flock of House Crow in Kowloon Tsai Park. <http://www.hkbws.org.hk/board/messages> Nov. 2000.
- Jennings, M.C. (Ed) 1995. Recent Reports. *The Phoenix*. 12: 2.
- Jennings, M.C. 1992. The House Crow *Corvus splendens* in Aden (Yemen) and an attempt at its control. *Sandgrouse* 14: 27-33.
- Lens, L. 1996. Hitting back at House Crows. *Kenya Birds* 4: 55-56.

- Liversidge, R. 1985. Alien bird species introduced to South Africa. In: Bunning L.J. (Ed) *Proc. birds and man symposium*, pp. 31-44. Witwatersrand Bird Club, Johannesburg.
- MacKinnon, J. & Phillipps, K. 1993. *A field guide of the birds of Borneo, Sumatra, Java and Bali*. Oxford Univ. Press, Oxford.
- Madge, S. & Burn, H. 1994. *Crows and jays*. Helm (A & C Black), London.
- Matus, R. 1998. Presencia accidental de *Corvus splendens* (Aves: Corvidae) y nuevas registros de aves raras en Magallanes: *Rollandia gallardoi* y *Eremobius phoenicurus*. *Anales Instituto Patagonia, Serie Cs. Nat.* (Chile). 26: 137-139.
- McAdams, D, Milne, P. & O'Sullivan, O. 1999. Forty-sixth Irish Bird Report. 1998. *Irish Birds* 6: 377-406.
- Mullaney, K., O'Sullivan & Lovatt, J.K. 1999. House Crow *Corvus splendens* in County Waterford – an addition to the Irish List. *Irish Birds* 6: 427-430.
- Nakamura, K. 1987. Secret passenger. *Iden* (Heritage) 41: 84-87.
- Nation, B., Nation, N. & A. Hooper 1997. Birds new to Qatar. *Sandgrouse* 19: 56-62.
- Newmann, N. 1974. Indian House Crow. *Natal Wildlife* 14: 19-20.
- Nhancale, C.C., Bento, C.M. & Fred de Boer, W. 1998. The impact of the House Crow *Corvus splendens* on the Inhaca Island, Mozambique. *Ostrich* 69: 443.
- Norton, R.L. 1995. West Indies Region. *National Audubon Society Field Notes* 49: 203-204.
- O'Meara, M. 1976. *Bird occurrences in County Waterford for 1974/5*. Irish Wildbird Counservation, Dublin.
- Robson, C. 2001. From the Field. *Oriental Bird Club Bull.* 34: 47-55.
- Ryall, C. 1992. The pest status of the Indian House Crow *Corvus splendens* in Mombasa and a survey of its expansion of range in coastal Kenya; In: Bennun, L. (Ed.) *Proc. VII Pan-African Orn. Congr. Nairobi*, Aug-Sept 1988. PAOC, Nairobi.
- Ryall, C. 1994. Recent extensions of range in the House Crow *Corvus splendens*. *Bull. Brit. Orn. Cl.* 114: 90-100.
- Ryall, C. 1995. Additional records of range extension in the House Crow *Corvus splendens*. *Bull. Brit. Orn. Cl.* 115: 185-187.
- Ryall, C. & Reid, C. 1987. The Indian House Crow in Mombasa. *Swara* 10: 9-12.
- Schmidt, O. 1996. Recent extensions of range in the House Crow *Corvus splendens*. *Promerops* 222: 5-6.
- Shepherd, C. 2000. House Crow observed in north Sumatra. *Kukila* 10: 162-3.
- Skerrett, A.P., Bullock, I. & Disley, T. 2001. *Birds of the Seychelles*. Helm (A & C Black), London.
- Thornton, I.W.B., Zann, R.A. & Stephenson, D.G. 1990. Colonisation of the Krakatau islands by land birds, and the approach to an equilibrium number of species. *Phil. Trans. Roy. Soc. B., Biol. Sci.* 328: 55-93.
- van de Berg, A.B. 1994. WP Reports. *Dutch Birding* 16: 157-166.
- van de Berg, A.B. & Bosman, C.A.W. 2001. *Rare birds of the Netherlands, Revised Edition*. Pica Press, East Sussex.
- Viney, C., Phillipps, K. & Lam, C.Y. 1996. *Birds of Hong Kong and South China*. Government Publishing, Hong Kong.
- WCST 1998. *House Crow control May/June 1998*. Wildlife Conservation Society of Tanzania, Dar-es-Salaam.

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